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UPDATE

Bitterroot Valley Sanitary Landfill CECRA Site Report

By the Montana Department of Health and Environmental Sciences

What's happening at the site?

The Montana Department of Health and Environmental Sciences (MDHES) will conduct a public meeting Wednesday, March 3, 1993. MDHES will hold an open house from 3-5 p.m. and a public meeting at 7 p.m. Both will be at the Victor School multi-purpose room. The purpose is to discuss with the community the results of a hydrogeologic investigation conducted from 1991 through 1992, by Chen-Northern Inc., at the Bitterroot Valley Sanitary Landfill (BVSL) south of Victor. Chen-Northern is a private consulting firm under contract with the National Institutes of Health (NIH).

Three potentially liable persons have been identified at the site: Bitterroot Valley Sanitary Landfill Inc., Ribi ImmunoChem Research Inc. and Rocky Mountain Laboratories which is a subsidiary of NIH. It is possible that other potentially liable persons will be identified in the future.

Thirteen well owners are currently receiving bottled water. These owners either have well water which showed contamination in previous site investigations or have wells which have the potential to become contaminated due to their proximity to the site. MDHES is evaluating the adequacy of the bottled water provisions.

The purpose of this update is to summarize the results of the hydrogeologic investigation. A brief history of prior investigations at the site is contained on page 2.

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Recent investigation results

The primary objectives of the hydrogeoligic study were as follows:

- To evaluate the extent and severity of impacts to the area's groundwater system(s) from any releases of contaminants from the landfill.
- To address the interaction between groundwater and surface water (ponds, creeks and the Bitterroot River) in the vicinity of the landfill.
- To determine where groundwater and surface water in the vicinity of the landfill are or may become adversely impacted by contamination from the landfill.
- To determine if sediments in Bear Creek have been impacted by landfill contamination.
- To provide recommendations for future site activities.
- To determine the nature, source and extent of organic contaminants at the site.

Three types of field investigations were conducted to fulfill these objectives: 1) creek sediment, 2) surface water, and 3) groundwater. The results of the creek bed sediment investigation indicate sediments in the north channel of Bear Creek have not been impacted by contamination from the landfill. Samples of sediment collected along the creek were analyzed for a wide range of volatile organic compounds. None of the compounds were in high enough concentrations to be detected by laboratory methods.

The results of the surface water investigation indicate that contaminants are not entering the north channel of Bear Creek from the groundwater system. Groundwater in the area flows to the east and discharges into the Bitterroot River system.

The groundwater investigation included installing groundwater monitoring wells, sampling and analyzing groundwater, monitoring groundwater levels, conducting aquifer tests and creating a groundwater model. Following completion of these tasks the following conclusions were reached:

- The primary direction of groundwater movement is eastward toward the Bitterroot River.
- Chloroform and methylene chloride are the most predominant contaminants identified at the site. Groundwater in several wells exceeded the maximum contaminant level

~ Cont. on page 2 ~

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Investigation results (From page 1)

(MCL) for chloroform.

• A historic waste pit near the southwest portion of the landfill was used for disposal of laboratory waste. This pit is suspected to be the primary source of chloroform in downgradient groundwater.

• The highest concentrations of methylene chloride are found near the waste disposal pit and landfill shop. These areas may be the source areas of methylene chloride in groundwater.

• Other compounds identified as exceeding the maximum contaminant levels in on-site monitoring wells were trichloroethene, tetrachloroethene and vinyl chlori all of which are solvents.

• The primary area of groundwater contamination extends from the landfill in a long narrow path to the Bitterroot River. The extent of this plume is approximately 55 acres.

• The contaminants identified in samples from the wells at the site have remained consistent since 1987 when the first investigation was conducted. This may indicate the source of contamination is continuing to release contaminants to the groundwater system.

Site background

History of previous site investigations:

1987 - U.S. Environmental Protection Agency (EPA) conducts a screening site inspection at BVSL. Results of this investigation indicated on-site groundwater contamination with volatile organic compounds (VOC)s. The compound found in highest concentration and frequency was chloroform which is used as a solvent, extractant and chemical intermediate. Methylene chloride is a volatile organic compound also found at the site. It is used in aerosols, degreasers and paint removers.

1989 - Chen-Northern, a consultant for Bitterroot Valley Sanitary Landfill Inc. conducts two groundwater investigations between May and October. Results indicate on- and off-site groundwater contaminated with volatile organic compounds.

1990 - EPA conducts a listing site inspection in August to determine BVSL's potential to become a federal Superfund site. Results of this study indicated both on- and off-site contamination of groundwater and off-site contamination of creek sediments with volatile organic compounds.

1991 - BVSL Inc. provides bottled water to affected residences. MDHES holds a public meeting in April to discuss results of EPA sampling and upcoming studies. Chen-Northern and MDHES conduct domestic well sampling i June and September. NIH begins a hydrogeologic investigation to determine the physical and geological parameters affecting contaminant migration through soils and groundwater.

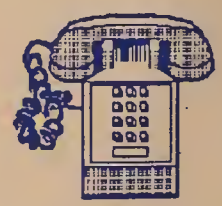
1992 - Hydrogeologic investigation continues.

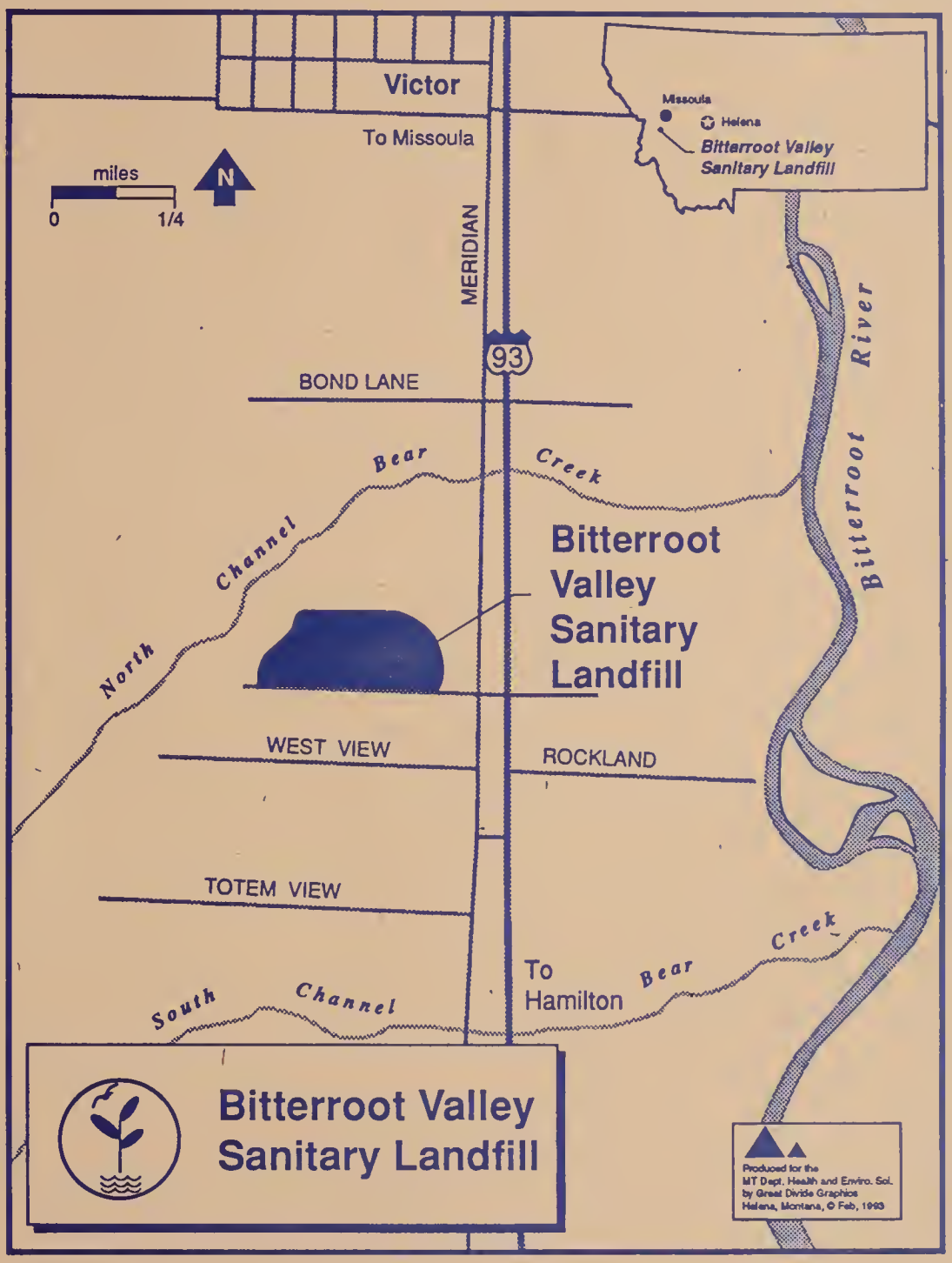
Learn more about the site

If you want to learn more about the studies conducted at BVSL, copies of the following documents can be found at the Bitterroot Public Library or Farmers State Bank in Victor:

- *Phase I Hydrogeological Investigation at the Bitterroot Valley Sanitary Landfill*, by Chen-Northern, August 1989.
- *Data Summary Report - Groundwater Monitoring at the Bitterroot Valley Sanitary Landfill*, by Chen-Northern, December 1989.
- *Analytical Results Report - Domestic Well Sampling - Bitterroot Valley Sanitary Landfill*, by Chen-Northern, July 1991.
- *Site Inspection Report for the Bitterroot Valley Sanitary Landfill*, by EPA, 1987.
- *Final Listing Site Inspection Report for the Bitterroot Valley Sanitary Landfill*, by EPA, 1991.
- *Hydrogeologic Characterization of the Bitterroot Valley Sanitary Landfill*, by Chen-Northern, January 1993

If you have questions, comments or concerns about the Bitterroot Valley Sanitary Landfill CECRA site, please call our toll-free CECRA-Superfund hotline in Helena.
1-800-648-8465
8 a.m. - 5 p.m. weekdays, except holidays





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If you wish your name to be added to or deleted from the mailing list for the Bitterroot Valley Sanitary Landfill-CECRA site, or if you wish to update your address, please fill out, detach, and mail the following form to Jane Heath Stiles, Montana Department of Health and Environmental Sciences, Cogswell Building, Helena, MT 59620.

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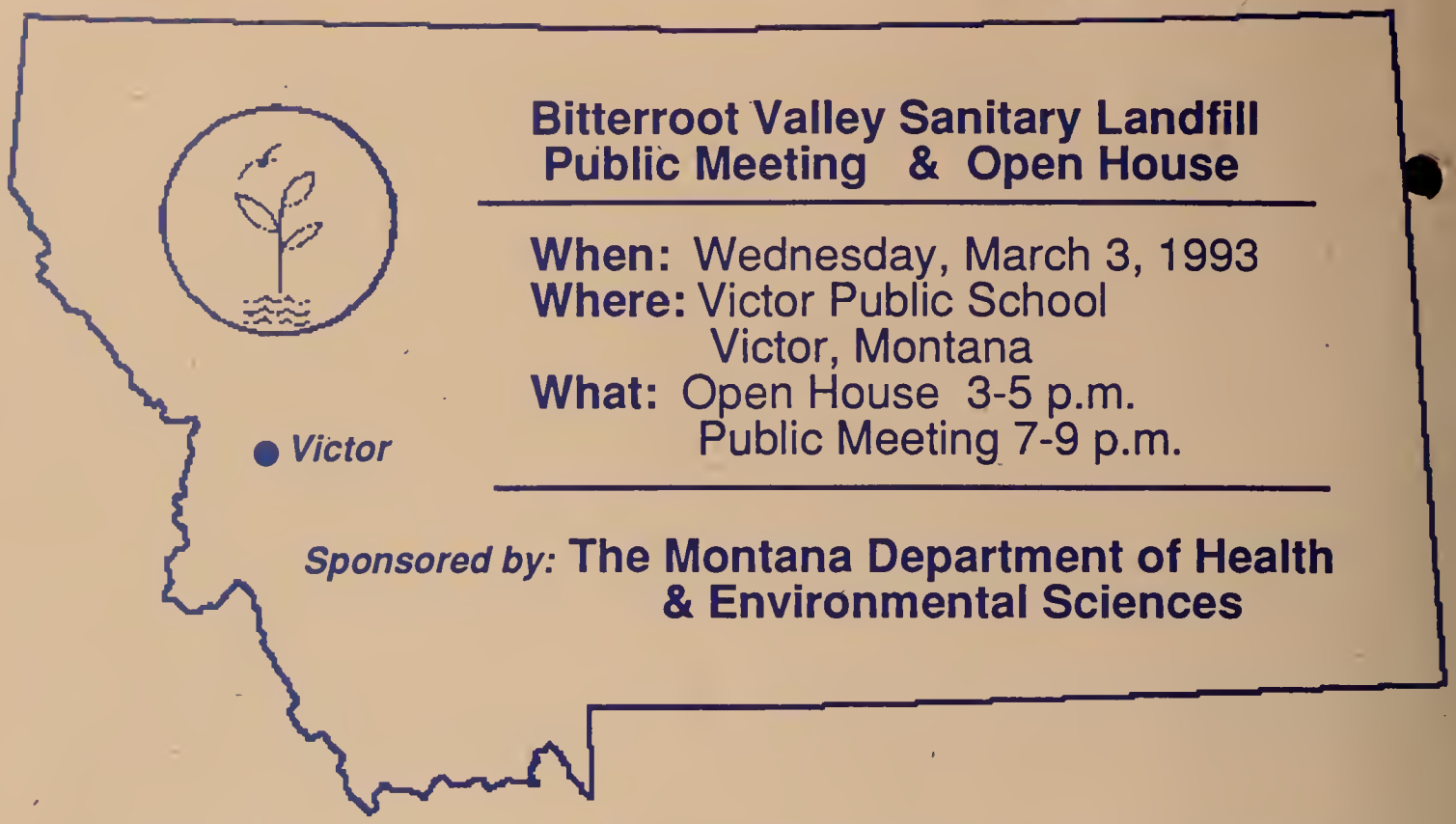

Bitterroot Valley Sanitary Landfill Public Meeting & Open House

When: Wednesday, March 3, 1993
Where: Victor Public School
Victor, Montana
What: Open House 3-5 p.m.
Public Meeting 7-9 p.m.

Sponsored by: **The Montana Department of Health & Environmental Sciences**

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